



HTTP://ATTRASOFT.COM  
Neural Net Software Company

"Image Recognition Experts"

December 22, 2007

Mail Stop RCE  
United State Patents and Trademark Office  
Commissioner For Patents  
P. O. Box 1450  
Alexandria, Virginia 22313-1450

Application NO. 10/078,299  
Name of Applicant: Ying Liu  
Name of Examiner: Rosario, Dennis  
Date of Interview: NA  
Type of Interview: NA  
Name of Participants: Dennis Rosario (examiner), Ying Liu (applicant)  
Exhibit: NA  
Specific Prior Art: NA

To Whom it May concern:

As recommend by Patent Examiner: Rosario, Dennis, the RCE is filled in this letter. Form, "Request for Continued Examination (RCE) Transmittal" is attached with this letter. A fee of \$395, based on 1.17 (e) Small entity, is attached.

The original claim 19, which covers the algorithms of this invention, is expanded into 6 claims. No new materials are added in this patent application. As a result, Continuation-in-Part Application is also filed with this letter. A fee of \$60, based on 1.17 (a) (1) Small entity, is attached.

Thanks again for you help.  
With Kindest Regards,

Ying Liu, Ph.D.  
Attrasoft  
[ying@attrasoft.com](mailto:ying@attrasoft.com)  
912-897-1717

12/28/2007 HDESTA1 00000057 10078299

01 FC:2251

60.00 OP



# UNITED STATES PATENT AND TRADEMARK OFFICE



UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/078,299	02/20/2002	Ying Liu		3371

7590  
Ying Liu, Ph.D.  
1020 PineNeedle Dr.  
Savannah, GA 31410

11/30/2007

EXAMINER

ROSARIO, DENNIS

ART UNIT	PAPER NUMBER
----------	--------------

2624

MAIL DATE	DELIVERY MODE
-----------	---------------

11/30/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



**Advisory Action**  
**Before the Filing of an Appeal Brief**

Application No. 10/078,299	Applicant(s) LIU, YING	
Examiner Dennis Rosario	Art Unit 2624	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 09 October 2007 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.  
b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**NOTICE OF APPEAL**

2. ☐ The Notice of Appeal was filed on \_\_\_\_\_. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

**AMENDMENTS**

3. ☒ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because:  
(a) ☒ They raise new issues that would require further consideration and/or search (see NOTE below);  
(b) ☐ They raise the issue of new matter (see NOTE below);  
(c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or  
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: See Continuation Sheet. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).  
5. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.  
6. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).  
7. ☒ For purposes of appeal, the proposed amendment(s): a) ☒ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.  
The status of the claim(s) is (or will be) as follows:  
Claim(s) allowed: \_\_\_\_\_.  
Claim(s) objected to: \_\_\_\_\_.  
Claim(s) rejected: 19.  
Claim(s) withdrawn from consideration: \_\_\_\_\_.

**AFFIDAVIT OR OTHER EVIDENCE**

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).  
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing of a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).  
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

**REQUEST FOR RECONSIDERATION/OTHER**

11. ☐ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: \_\_\_\_\_.  
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). \_\_\_\_\_  
13. ☐ Other: \_\_\_\_\_

SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER

Continuation of 3. NOTE: The limitations of "training a fully connected neural net with the ABM learning algorithm" and "extending training" and "computing a matching score" requires a new search and consideration..



## **United States Patent**

**Application Number: 10/078,299**

**Filing/Receipt Date: 02/20/2002**

**First Named Applicant: Ying Liu**

**Name of Examiner: Rosario, Dennis**

**Name of Participants: Dennis Rosario (examiner), Ying Liu (applicant)**

**Confirmation No. 3371**

**Provisional Application Number 60/296,245**

**Provisional Filing Date 06/06/2001**

**Total Claims 6**

# Attrasoft Image Retrieval

Inventor: Ying Liu, Savannah, GA

Abstract.....	4
TECHNICAL FIELD .....	5
BACKGROUND OF THE INVENTION .....	6
TECHNICAL BACKGROUND .....	8
1. Images.....	8
2. Mapping.....	10
3. Markov Chain and Pattern Classification .....	10
4. Markov Chain and Neural Network .....	11
5. Artificial Neural Net.....	11
SUMMARY OF THE INVENTION.....	14
1. Process .....	14
2. Parameters.....	19
3. System Layout .....	20
4. Algorithms .....	20
5. Components and Application-Programming Interface .....	23
BRIEF DESCRIPTION OF VIEWS OF THE DRAWING .....	24
DETAILED DESCRIPTION OF THE DISCLOSED EMBODYMENT .....	28
Preferred Embodiment of the Search System.....	28
About This Invention.....	28
Overview of the ABM Process .....	29
Overview of the APN Process .....	31
User Interface Layer of software for implementation of ABM and APN Algorithms.....	33
Presentation Layer of software for implementation of ABM and APN Algorithms.....	37
ABM Layer of software for implementation of ABM and APN Algorithms.....	37
Sample Implementation .....	46
Attrasoft ImageFinder 4.9.....	46
Attrasoft PolyApplet 5.0 .....	48
Attrasoft TransApplet 5.1 .....	49
CLAIMS .....	51
Appendix A.    Accompanying Application Document and CD .....	52
Figure 1.....	58
Figure 2.....	59
Figure 3.....	60
Figure 4.....	61
Figure 6.....	63
Figure 7.....	64

Figure 8.....	65
Figure 9.....	66
Figure 10.....	67
Figure 12.....	69
Figure 13.....	70
Figure 17.....	74
Figure 18.....	75
Figure 19.....	76